

INFORMATION REPORT

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SUBJECT First Chief Directorate and Institutes Engaged in Atomic Research

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First Chief Directorate

1. The general direction and coordination of atomic research in the USSR is conducted by the First Chief Directorate attached to the Council of Ministers of the USSR (Pervoye Glavnoye Upravleniye pri Sovete Ministrov SSSR). 50X1-HUM
2. The offices of this organization are located in Moscow on Nove-Myazanskaya ulitsa in the vicinity of the Kazan railway station. The offices are probably located in two or more buildings. [redacted] there are no signboards or inscriptions on the buildings. The sentries and special pass-issuing office are inside the building. From the outside, the buildings do not give the impression of being an important government institute. 50X1-HUM
3. [redacted] the head of the First Chief Directorate is Vanin. [redacted]
4. [redacted]
[redacted] a certain Utkin [redacted] supervised the Institute of General and Inorganic Chemistry on behalf of the First Chief Directorate [redacted] 50X1-HUM
[redacted] Utkin had an office in the Directorate building.
5. [redacted] the First Chief Directorate coordinates all atomic research. 50X1-HUM

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a.

Professor Petrov, Director of the Laboratory of Light Alloys (Laboratoriya Ljagkikh Splavov). Professor Petrov's laboratory [redacted] was experimenting on the preparation of porous membranes (partitions) for the separation of isotopes by the diffusion method. For the correct solution of this problem, a prize of 100,000 rubles was promised. [redacted] the metal membrane could be replaced by plastic ones (plastmassa) with better results in the separation of the isotopes. [redacted]

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b.

On many other occasions new ideas, reports on shortages of certain equipment, or complaints about slackness of factories which were required to deliver certain materials [redacted] were [redacted] always referred via Utkin to the First Chief Directorate, which acted very promptly and efficiently.

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c.

At a conference at the First Chief Directorate in 1947, Malyshev, then the Minister of Transport Machinery Construction, was severely attacked for his failure to produce certain machinery needed for atomic research. Malyshev pleaded that he could not obtain correct or agreed specifications for the material from which the machinery was to be made. [redacted]

50X1-HUM

6. Examples of shortages of equipment mentioned above included the following:

a. Ionized manometers (ionizatsionniye manometri) were at first practically unobtainable; later the necessary quantity of these manometers was produced by an aircraft factory on the instructions of the First Chief Directorate.

b. Vacuum pumps (forvakuumniye nasosi) and diffusion oil pumps (difuzionniye nasleniye nasosi or nasosi visokogo vakuma, type FeV1100), practically unobtainable in the beginning, were produced and delivered as a result of the intervention and direction of the First Chief Directorate. The first pumps were obtained from the Central Vacuum Laboratory, in Moscow, located in the buildings of the Moscow Electric Lamp factory (Moskovski Elektro Lampovy Zavod) on ulitsa Baumana. A model of a high vacuum pump (nasos visokogo vakuma) designed for industrial purposes was seen in this laboratory in 1947. The model was approximately one meter high and had a diameter of approximately $\frac{1}{2}$ meter.

c. There was also a shortage of special oil for vacuum pumps of type VM-4. Factory No. 403, which is located in Moscow near the Severyanin railway station and belongs to the new Ministry of the Oil Industry, began producing this oil and also received equipment to start the production of special oils for the high vacuum diffusion pumps. One of the Leningrad rubber factories was also ordered to start production of vacuum hoses.

7. [redacted] the First Chief Directorate has stores of its own of certain materials and equipment required for atomic research and that a word from this organization carries great weight, possibly top priority, with the managements of Soviet industrial enterprises.

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8. Deputy Chairman of the Council of Ministers Beriya is believed to have the last word in all matters of atomic research. His organization is responsible for all security measures in connection with atomic research, and a Spetsotdel (MVD Special Section) is attached to every university and scientific institute, including the Institute of General and Inorganic Chemistry. Representatives of these sections control even the ordinary laboratories. During holidays, doors of some of these laboratories are sealed by members of the Special Section. Beriya's name is used to "stimulate" slackers. [redacted]

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REF ID: A65916

CENTRAL INTELLIGENCE AGENCY

- 3 -

Special Research Branch of the Academy of Sciences

9. At the beginning of 1947, a special section (otdel spetsrabot) was formed in the Academy of Sciences of the USSR. Dr. Gorenkin was appointed head. The branch was located in the building of the Praesidium of the Academy of Sciences at Moscow, on Bolshaya Kaluzhskaya ulitsa. Current academic gossip insisted that the task of this branch was to coordinate all work on uranium and atomic research by institutes and laboratories of the Academy of Sciences.

Kurnakov Institute of General and Inorganic Chemistry

10. N. S. Kurnakov Institute of General and Inorganic Chemistry (Institut Obshchei i Neorganicheskoi Khimii imeni N. S. Kurnakova) is directed by I. I. Chernyayev and is attached to the Soviet Academy of Sciences. It is located at Bolshaya Kaluzhskaya ulitsa 31, Moscow.

11. Chernyayev, member of the Academy of Sciences, is a pure scientist who is interested in complex chemical combinations (kompleksniye soyedineniya), and until the spring of 1947 the institute was concerned with normal academic work. The director was invited several times to the First Chief Directorate and was persuaded against his better judgement to initiate a new program of work concerned with chemical combinations of uranium. He considered that the normal work of certain laboratories was seriously hindered by this change. However, he was forced to accept the change, as all similar Soviet institutions were required to turn their activities toward atomic research. The following tasks were given to various laboratories of the institute:

- a. The analytical laboratory, directed by Professor Taranayev, started research on chemical combinations of uranium.
- b. The laboratory of crystallography and crystal chemistry directed by Professor G. B. Boki, made Debyeograms** of the samples sent by the analytical laboratory. These samples were usually chemical combinations of uranium.
- c. The laboratory of light alloys, directed by Professor D. A. Petrov, experimented on preparations of porous membranes (partitions) for the separation of isotopes by the diffusion method.
- d. Prof. T. F. Kornilov, who directed the laboratory of iron alloys, often visited the Elektrostal plants (approximately 50 km. from Moscow in the direction of Gorki) and obtained from them on one occasion a new specimen of high grade steel which could be used in very high temperatures (stal dia rabot v vischikh temperaturakh). Certain shops of these plants were converted to the production of anti-corrosive alloys. It is known that certain employees of Elektrostal are earning fantastic salaries for secret work connected with uranium.
- e. The X-ray laboratory, directed by Professor Ageyev, collaborated with the laboratory of crystallography in the work described above. This laboratory received requests from other laboratories for Debye cameras adjusted in such a way that it would be possible to obtain radiographs (rentgenovskie snimki) in very high temperatures in a vacuum.

12. Similar conversions occurred in all the other laboratories of the institute.

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Special Laboratories

13. Special Laboratories Nos. 1, 2, and 3 (Spetslaboratoriya) form part of the Academy of Sciences organization. Special Laboratory No. 1 is known to exist.

14. Special Laboratory No. 2 is located in Moscow. The director is Academician Alikhanov, an Armenian whose proper name is Alikhanian.

50X1-HUM

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CENTRAL INTELLIGENCE AGENCY

- 4 -

is engaged in secret research in close contact with special Laboratory No. 3. Workers are taken to Laboratory No. 2 by buses which start from the Kaluzhskaya Ploshchad.

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15. [redacted] Special Laboratory No. 3, which [redacted] 50X1-HUM is located in the Moscow suburb of Pokrovsko-Streshnevo or Pokrovsko-Glebovo.

The offices and laboratories are located in a new building. This and neighboring buildings are still in the process of construction [redacted] numerous 50X1-HUM PWS working on the scaffoldings. The inside of the building is heavily guarded and special passes are required for entrance.

50X1-HUM

16. [redacted] Kikoin, Deputy Director of the laboratory [redacted] is a corresponding member of the Academy of Sciences [redacted] The Director of Special Laboratory No. 3 is member of the Academy of Sciences Sobolev.

17. [redacted] Special Laboratory No. 3 works on the separation of isotopes by the diffusion method and on other physico-chemical processes. 50X1-HUM A special group of designers or constructors attached to this laboratory was employed in building various apparatus to test the porous membranes used in the separation of isotopes by the diffusion method.

18. All orders to the Soviet industry originated by Special Laboratory No. 3 go through the First Chief Directorate and must be executed immediately.

19. The laboratory has its own gas generator and probably its own power station.

50X1-HUM

20. [redacted] during recent months two laboratory workers had died of nose and throat hemorrhages which the doctors were unable to stop.

Institute of Physical Chemistry

21. The Institute of Physical Chemistry of the Academy of Sciences of the USSR is located in Moscow, at Bolshaya Kaluzhskaya ulitsa 31, in the same building as the Institute of General and Inorganic Chemistry. The director of this institute is Academician Frunkin, who is also director of the Laboratory of Electro-Chemistry at Moscow University.

22. Since the spring of 1947, this institute has directed its activities to research on combinations of uranium. The director accepted this change more willingly than other scientists and, probably as a result, the institute was given an entirely separate wing in the building and completely new equipment. The new program was the result of directives received from the First Chief Directorate. Notice boards were placed on nearly all doors of the institute reading, "Secret work; entrance prohibited". All doors were covered with felt.

23. The following persons are known to have been employed at this institute:

- a. Director of the X-ray Laboratory: Dankov.
- b. Director of the Laboratory of Superficial Phenomena (Laboratoriya Poverkhnostnih Iavlenii): Academician Petr Aleksandrovich Rebiner. This laboratory studied superficial phenomena observable on the borders of two media; for instance: liquid emulsion, liquid foam. Rebiner has published much work on this subject.
- c. Scientific workers: Roginski, Dubovitski, Shetekster, and Figueovski.

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CENTRAL INTELLIGENCE AGENCY

- 5 -

Other Institutes

24. The following institutes of the Academy of Sciences directed their activities to the problems connected with atomic research:

a. Institute of Organic Chemistry. Director: Academician Nesmeyanov.

b. Institute of Chemical Physics, Moscow, near Kaluzhskoye Shosse. Director: Academician Semenov.

c. Institute of Physical Problems, Moscow, Kaluzhskoye Shosse.

Director until spring 1947: Peter Kapitsa. In the spring of 1947, Kapitsa was dismissed from his post as Director of Physical Problems and from other posts, including that of General Manager of the Glavkislotorg plants. Articles appearing in the press accused Kapitsa of mismanagement of the affairs of Glavkislotorg and of showing wrong production data. Kapitsa was appointed to the post of Rector of Kazan University but did not take over his duties.

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About March 1948, it became known that Kapitsa had resumed his work in Moscow and was frequently visited by important persons.

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Kapitsa's dismissal was the result of his refusal to alter the work of his institute, and it was thought that his reinstatement resulted from his surrender to government pressure.

d. Institute of Physics (Riga). Director: Vavilov, President of the Academy of Sciences. Location unknown.

e. Institute of Organic Chemistry, Moscow, Bolshaya Kaluzhskaya No. 31a.

Moscow University

25.

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since late 1946 or early 1947, the Physical Faculty of the University has had a special branch to study problems connected with the atomic nucleus. Candidates selected to study these problems underwent AWD screening. All of them, after obtaining their diplomas, were put at the disposal of the First Chief Directorate and were employed according to its instructions.

Movement of Scientists and Equipment

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26. X-ray laboratory of the University of Riga:

the Director of the X-ray laboratory at the University of Riga, Professor Everēds (a Latvian), had collaborated for a very long period with Professor Straumanis, who had achieved outstanding results in research on the precise latitudes of the perimeters of crystal lattices.

27. Professor Chernyayev: In January 1949, Academician I. I. Chernyayev, Director of the Institute of General and Inorganic Chemistry, left Moscow for a secret destination to perform certain government tasks, returning at the end of August 1949.

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- 6 -



Comments:

"The head of the First Chief Directorate has previously been reported as Vannikov, former Minister of the Munitions Industry.

**Also reported as "Desraygramme".

**Possibly ginceng.

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